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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/067,938	02/08/2002	Yutaka Matsunobu	381AS/49196DV	8443

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EXAMINER

VANAMAN, FRANK BENNETT

ART UNIT	PAPER NUMBER
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3618

DATE MAILED: 03/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/067,938

Applicant(s)

MATSUNOBU ET AL.

Examiner

Frank Vanaman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 December 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 5, 7, 9, 13 and 17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 5, 7, 9, 13, and 17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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Status of Application

1. Applicant's amendment, filed December 2, 2003, has been entered in the application. Claims 5, 7, 9, 13, 17 are currently pending.

Drawings

2. Applicant's proposed drawing corrections, filed with the amendment, have been approved.

Claim Objections

3. Claim 7 is objected to because of the following informalities: In claim 7, line 3, it appears as though the parenthetical expression "(mechanical angle)" should be deleted in view of applicant's deletion of the other previously-present parenthetical expressions. Appropriate correction is required.

Claim Rejections - 35 USC §112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 5, 7, 9, 13 and 17 are rejected under 35 U.S.C. 112, first paragraph, because the best mode contemplated by the inventor has not been disclosed. Evidence of concealment of the best mode is based upon the reference to Tadahiro, the English abstract of Tadahiro, applicant's comments in the instant amendment, and the recitation of the claims in the instant application.

The inventive motor structure as disclosed and claimed includes a non-symmetrical pole structure, wherein the magnet inserting holes are oriented at a mechanical angle or inclination so as to be non-orthogonal to a radius line of the rotor, so as to allow the motor torque in one rotational direction to be greater than the torque

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in the opposing rotational direction. The motor structure of Tadahiro teaches the same structural attributes, as shown in figures 1 and 2. The English-Language abstract of the Tadahiro reference describes the inclined angle of the magnet inserting holes, and further refers to the resulting structure as being especially suited for operation in a single direction (abstract, lines 1-3).

In summary: both the motor structures of the instant application and the Tadahiro reference teach the same structural attributes. The motor structure of Tadahiro is disclosed as being suited for operation in one direction, however applicant's structure, which structure is the same as that taught by Tadahiro and for which structure no further limitations are disclosed or recited, is capable of operation in both rotational directions. The best mode has been concealed in that with no distinguishing structural differences between applicant's claimed and disclosed motor structure and that taught by Tadahiro, applicant's motor structure is capable of an operation (i.e., bi-directional rotation) which Tadahiro is not.

Claims Not Rejected over the Prior Art

6. Claims 5, 7, 9, 13, and 17 are not rejected as being unpatentable over or anticipated by the prior art, however these claims are not in condition for allowance, in view of the rejections under 35 USC § 112, first paragraph.

Response to Arguments

7. Applicant's comments have been carefully considered. As regards the reference to Tadahiro *applied as prior art*, applicant's arguments are persuasive in that while Tadahiro's structure may allow rotation in a direction having a lower torque than the torque available in the opposing direction, the intent of Tadahiro is to optimize the high torque delivery of the motor. As such, it is the examiner's understanding that while it may be obvious to one of ordinary skill in the art to employ a motor such as taught by Tadahiro with a vehicle as taught by Kawakatsu, it would not have been obvious to arrange the motor as taught by Tadahiro with the low torque rotation direction being used to supply power in the normal driving direction as Tadahiro's design is directed to

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the optimization of the high torque rotation direction. Note, however, that in view of the reference to Tadahiro being optimized for single direction operation, but having no distinguishing structural differences beyond that of the motor structure which applicant has disclosed and claimed, that the best mode contemplated by applicant has not been disclosed.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to F. Vanaman whose telephone number is 703-308-0424. Any inquiry of a general nature or relating to the status of this application should be directed to the group receptionist whose telephone number is 703-308-1113.

As of May 1, 2003, any response to this action should be mailed to:

Mail Stop _____
Commissioner for Patents
P. O. Box 1450
Alexandria, VA 22313-1450,

Or faxed to one of the following fax servers:

Regular Communications/Amendments: 703-872-9326
After Final Amendments: 703-872-9327
Customer Service Communications: 703-872-9325

F. VANAMAN
Primary Examiner
Art Unit 3618



3/1/04